

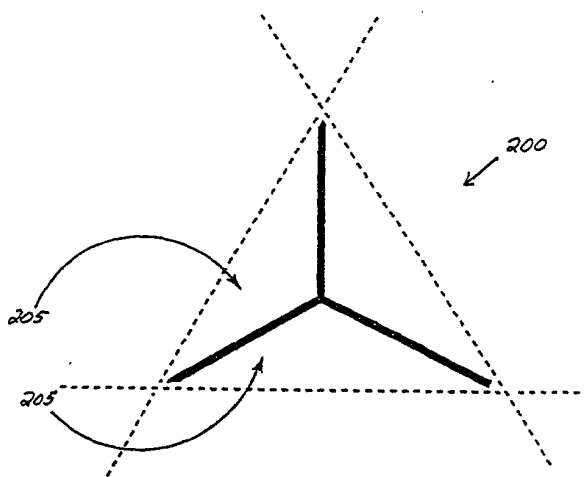
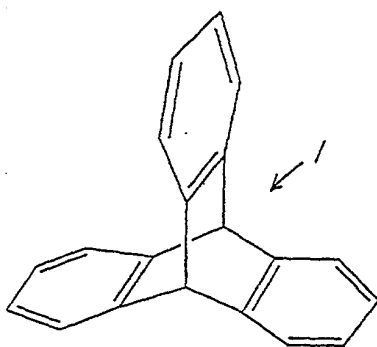
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FIG. 1A
PRIOR ART



2006200 09052050

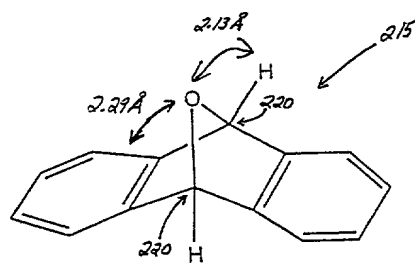
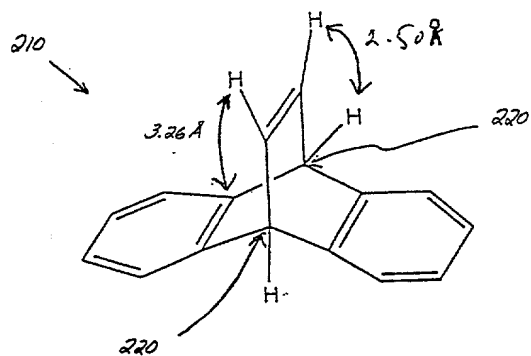


Fig. 1B

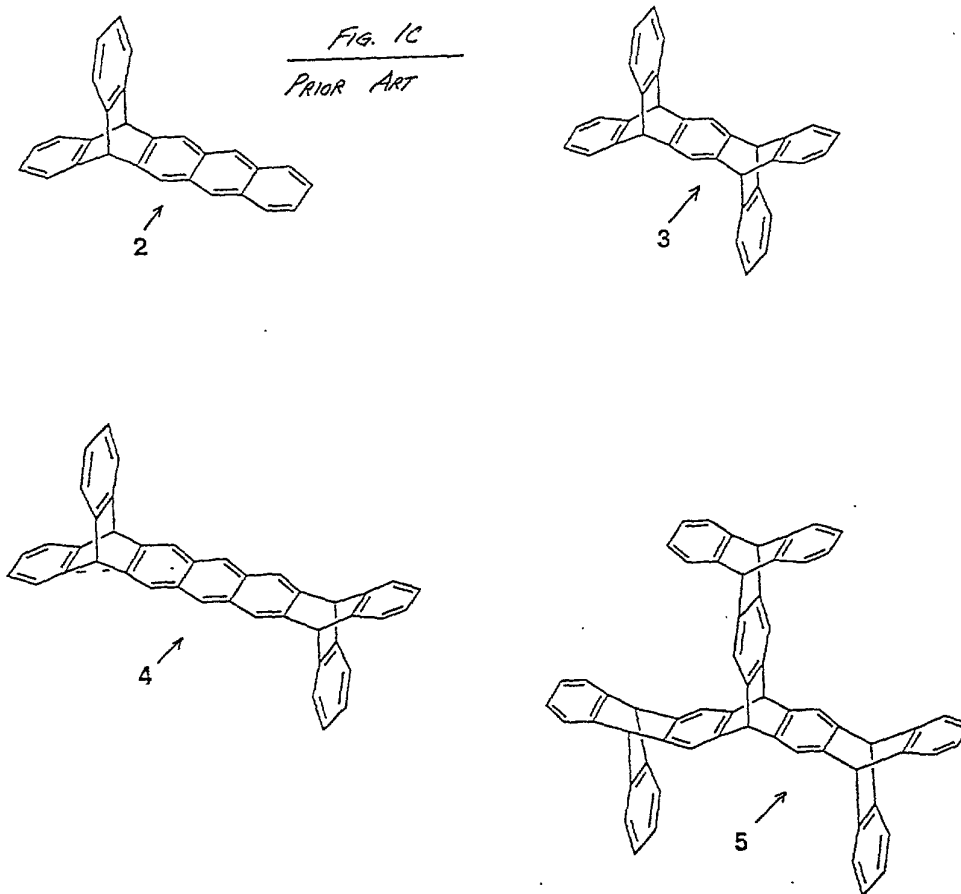
Prior Art

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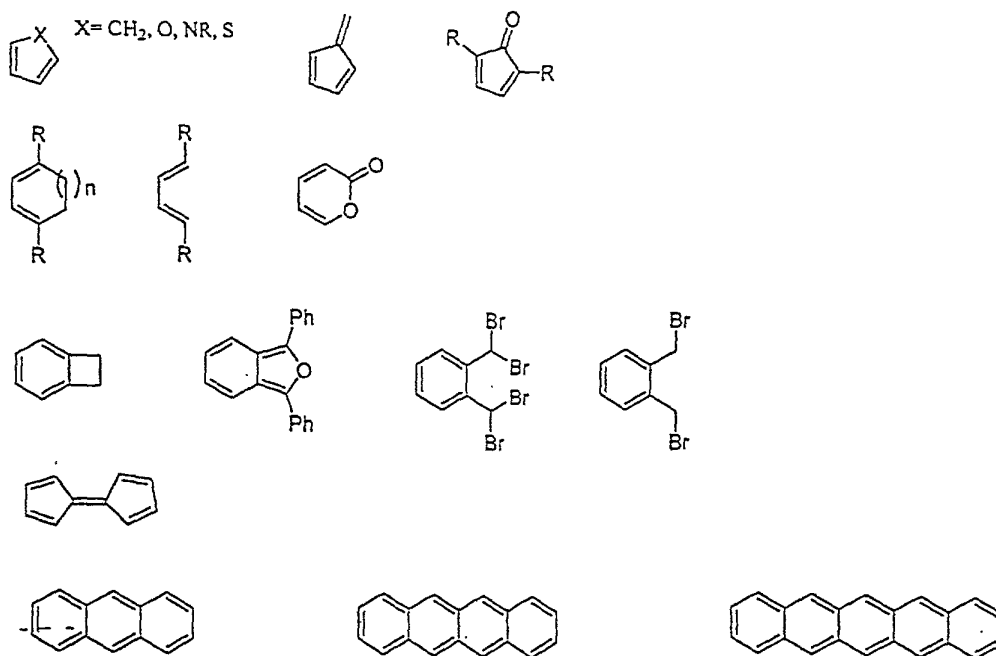


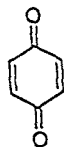
Fig. 1e

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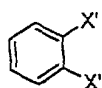
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$X = \text{CH}_2, \text{C}=\text{O}, \text{O}, \text{NR}, \text{S}$



$X' = \text{Cl}, \text{Br}, \text{I}$

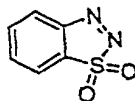
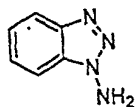
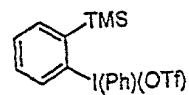
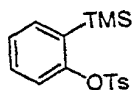
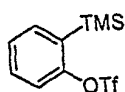
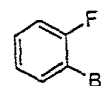
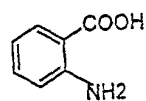
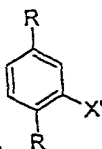


Fig. 1f

20060201 09095660

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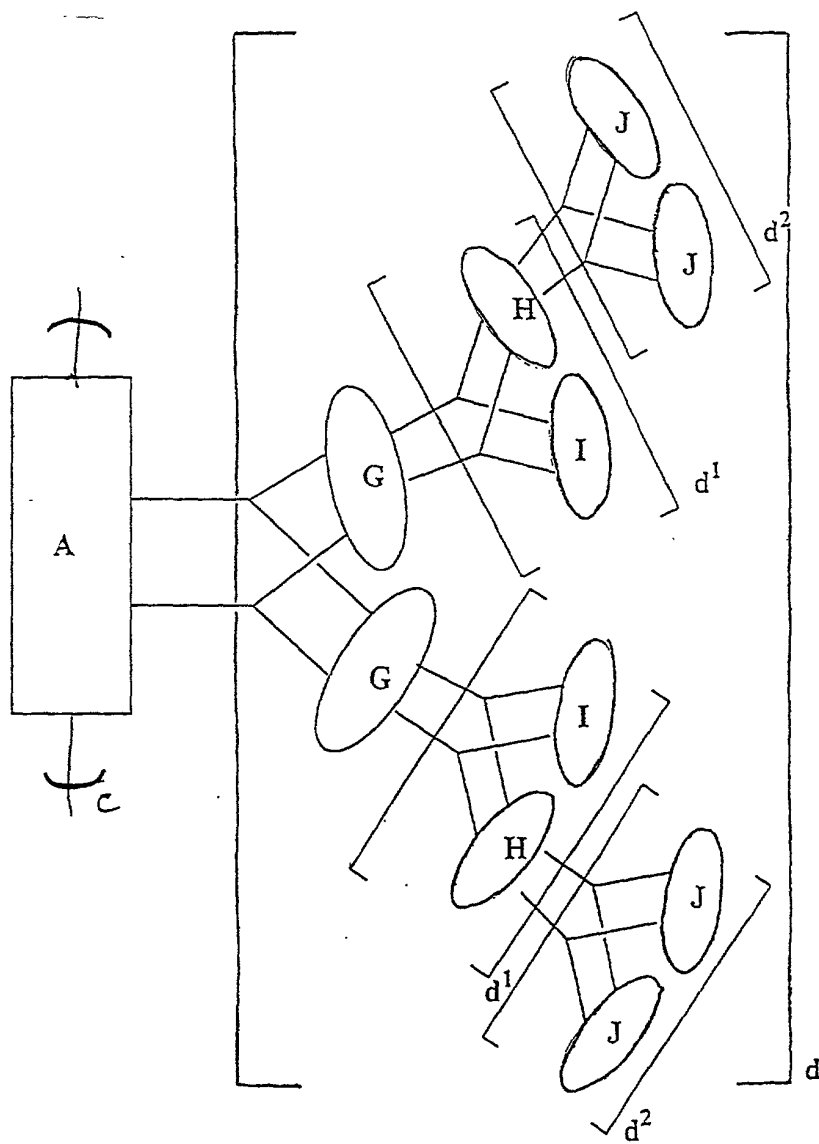


FIG. 1g

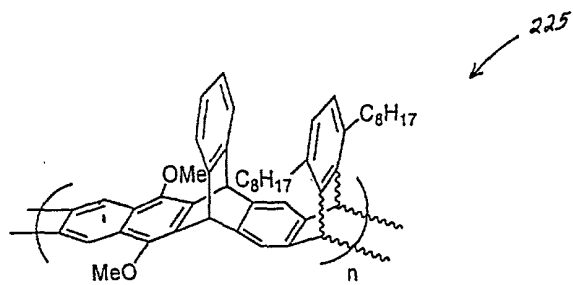
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TITLE: Polymers with high internal free volume

BY: Timothy M. Swager

FIG. 1H



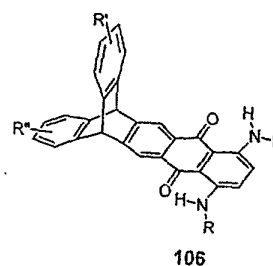
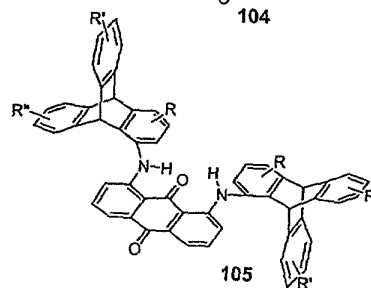
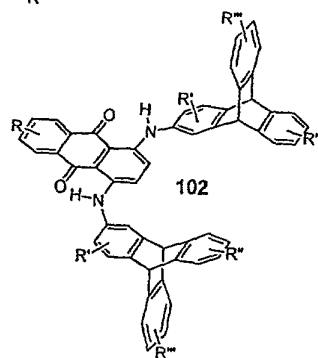
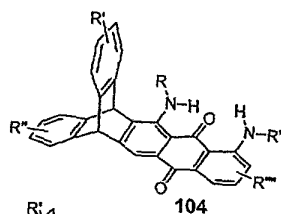
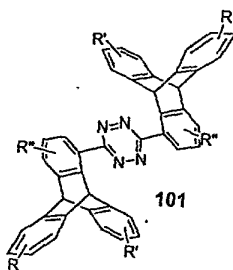
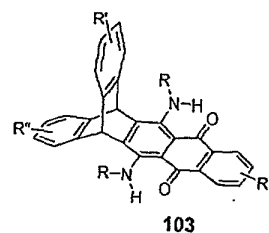
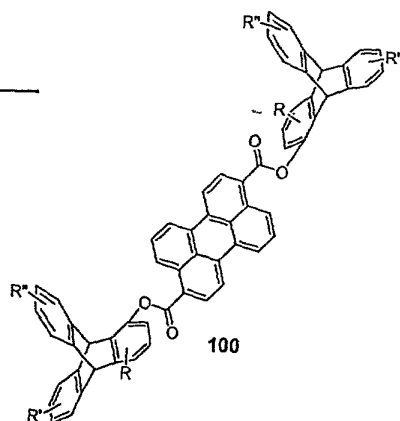
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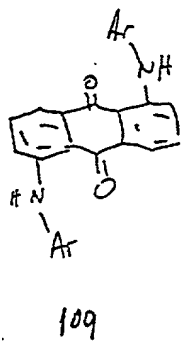
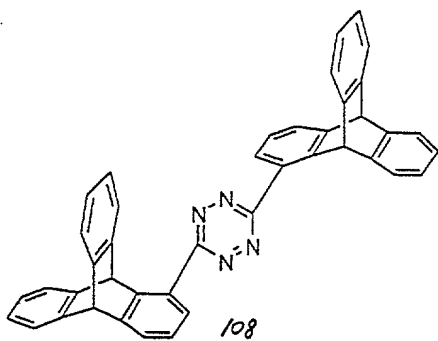
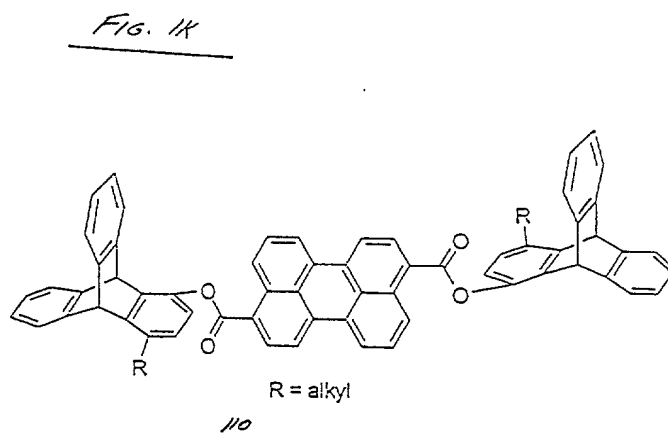
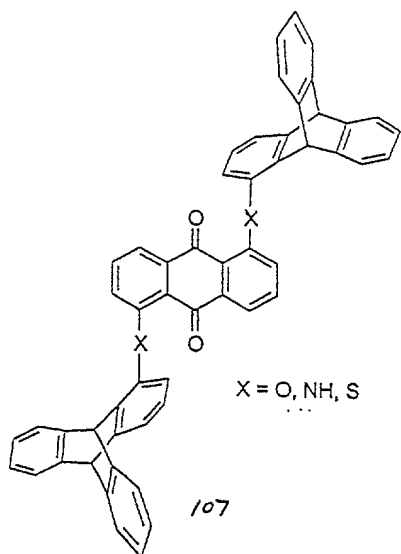
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FIG. 1J





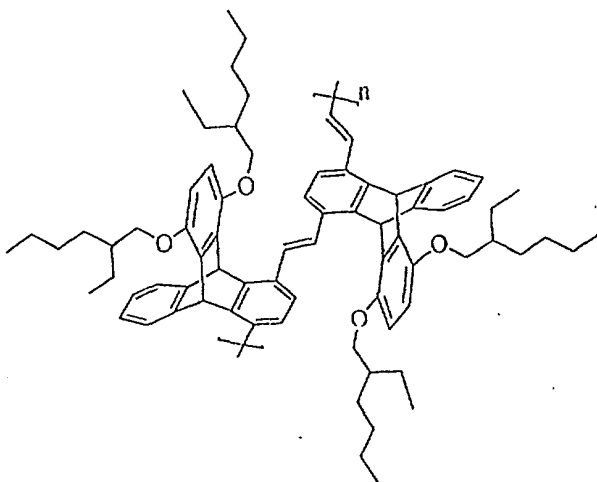
PATENT APPLICATION SERIAL NO.: 09/935,060

CONFIRMATION NO.: 7755

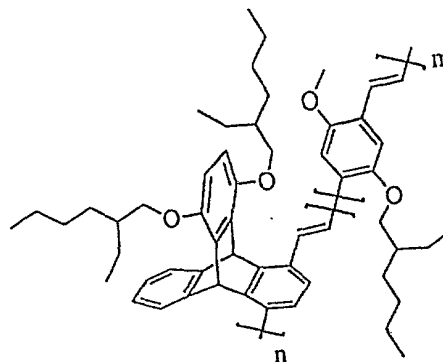
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BY: Timothy M. Swager

Fig. 14



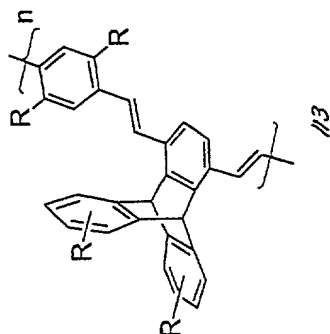
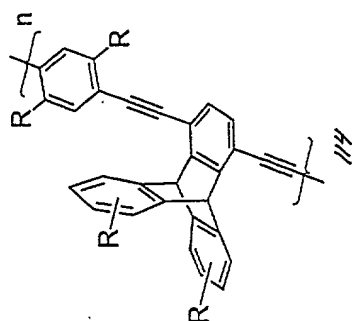
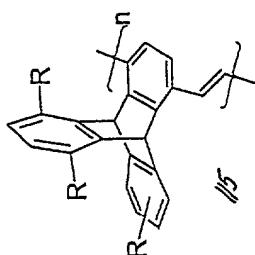
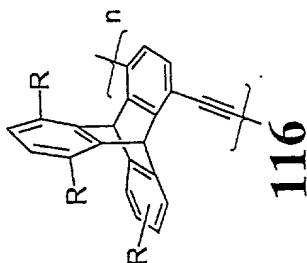
III



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Fig. 1M



$R = C_nH_{2n+1}, C_nF_{2n+1}, OC_nH_{2n+1}$

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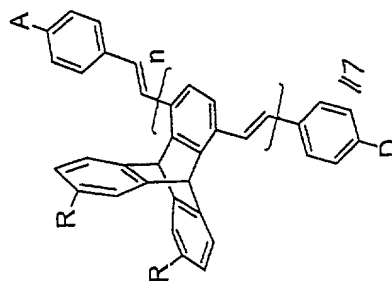
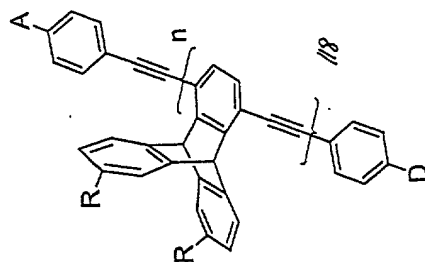
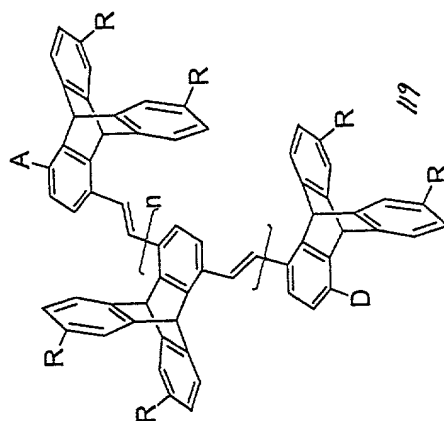
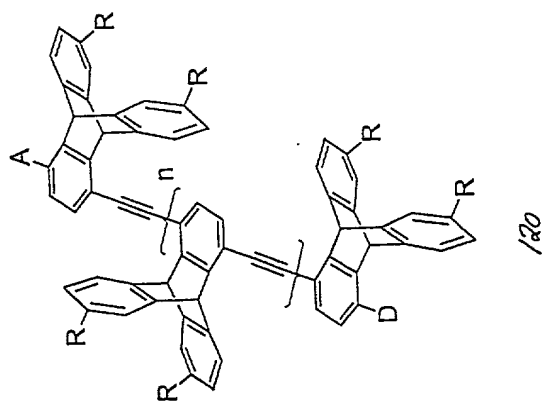


Fig. 1N

A = CN, C_nF_{2n+1} ,
D = $N(C_nH_{2n+1})_2$, OC_nH_{2n+1} ;
R = C_nH_{2n+1} , C_nF_{2n+1} , OC_nH_{2n+1}

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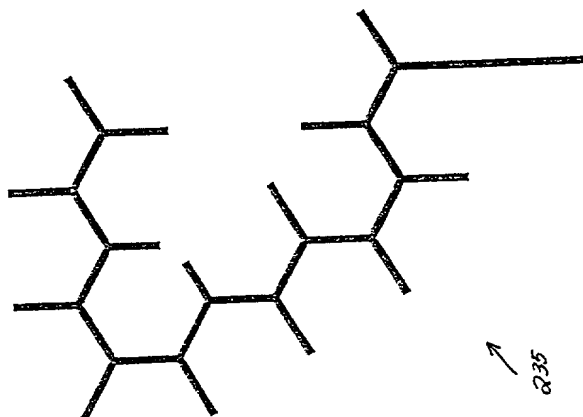
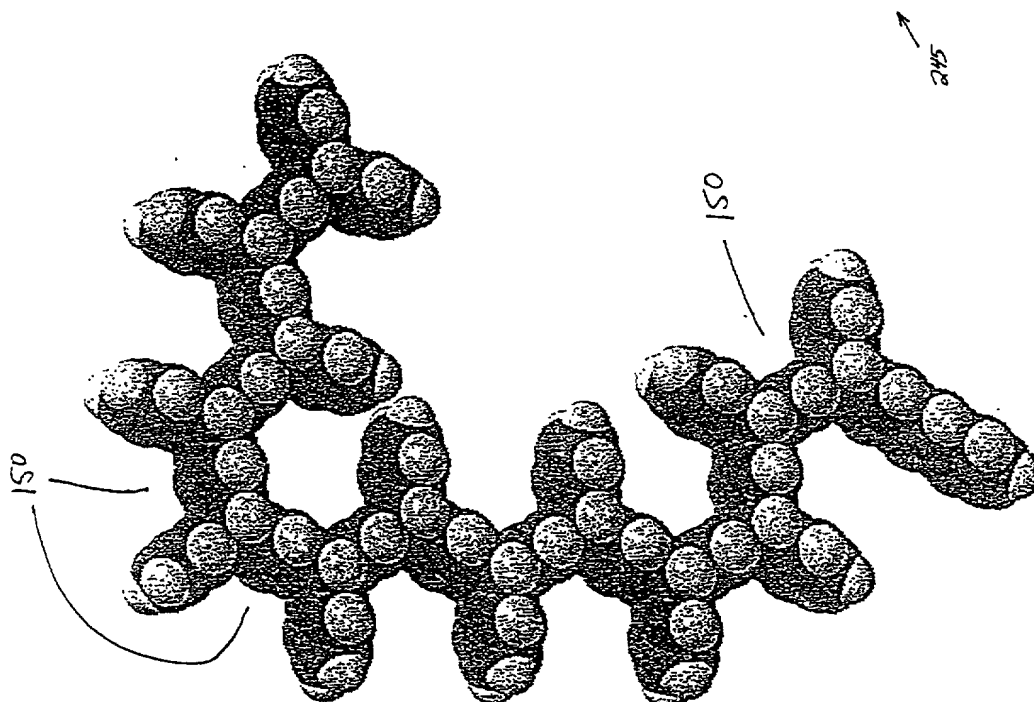
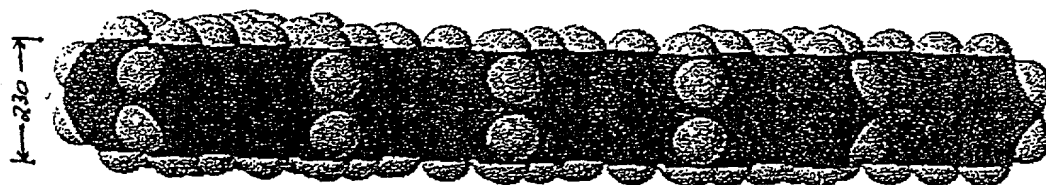


Figure 2

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FIG. 2A

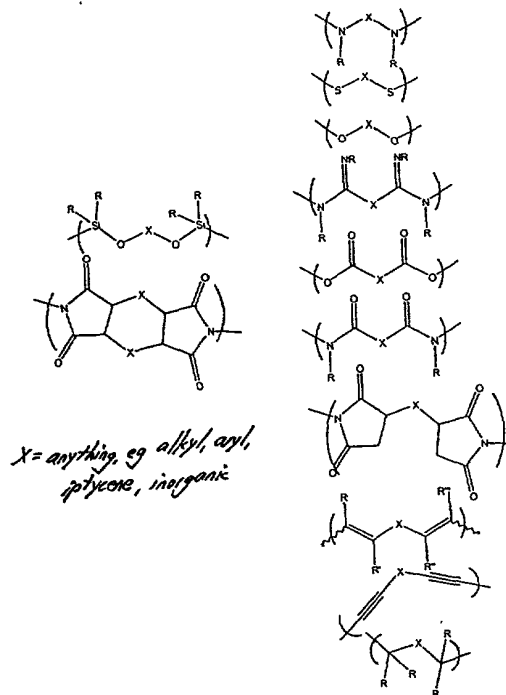
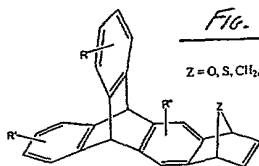


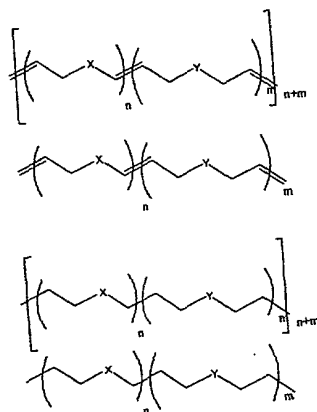
FIG. 2B

Z = O, S, ClI₂, CR₂



X or Y contains an ipitycene

FIG. 2C

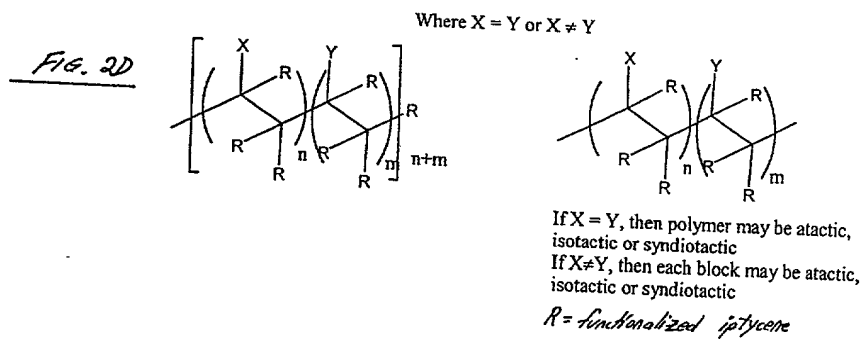


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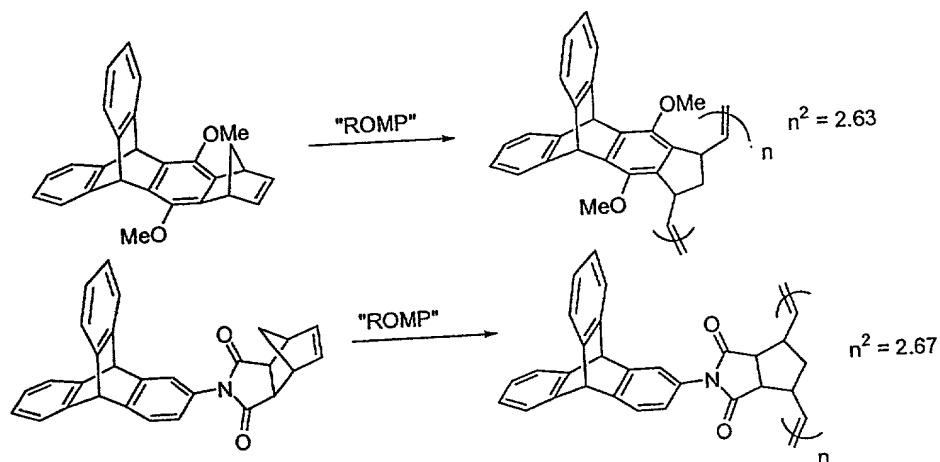
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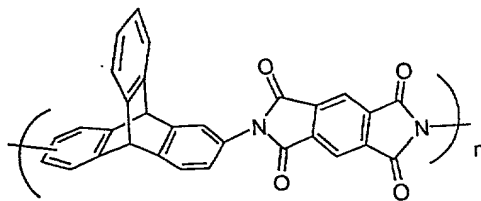
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FIG. 2E



Random co-polymer : $n^2 = 2.72$



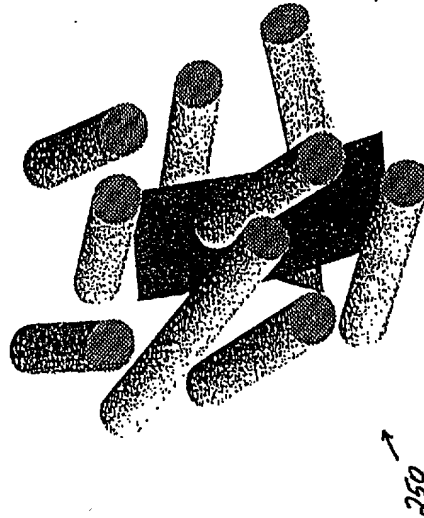
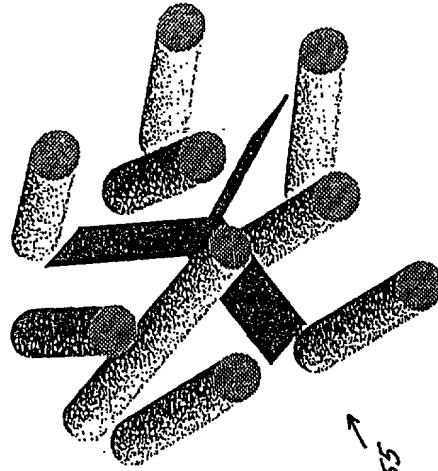
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FIG. 3

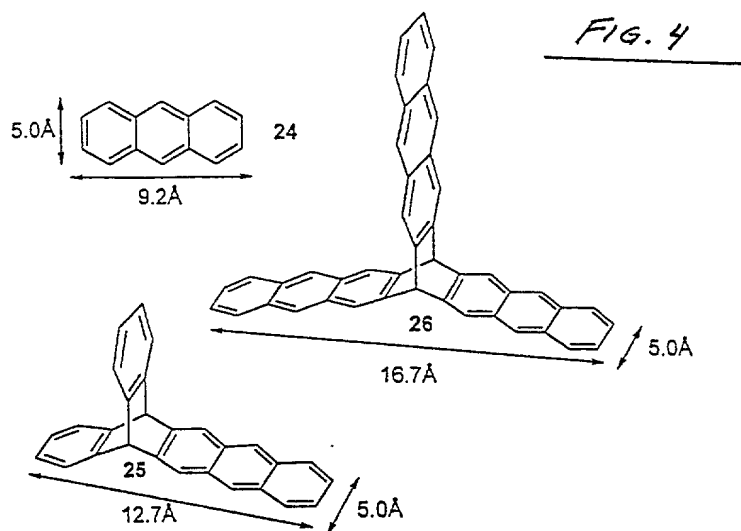


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FIG. 5

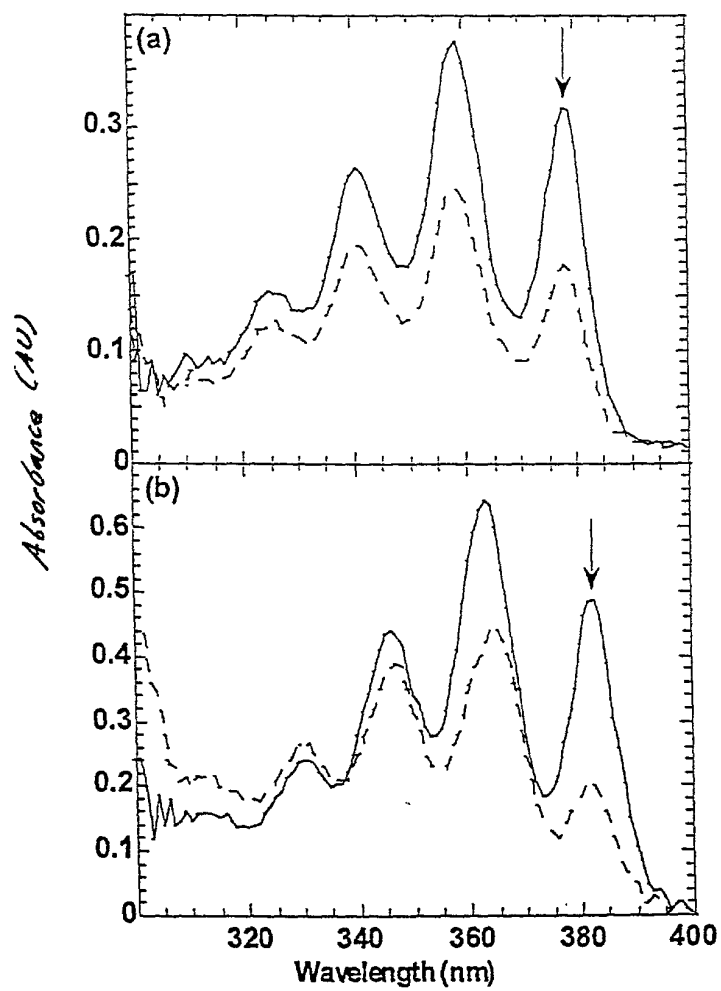


Fig. 6

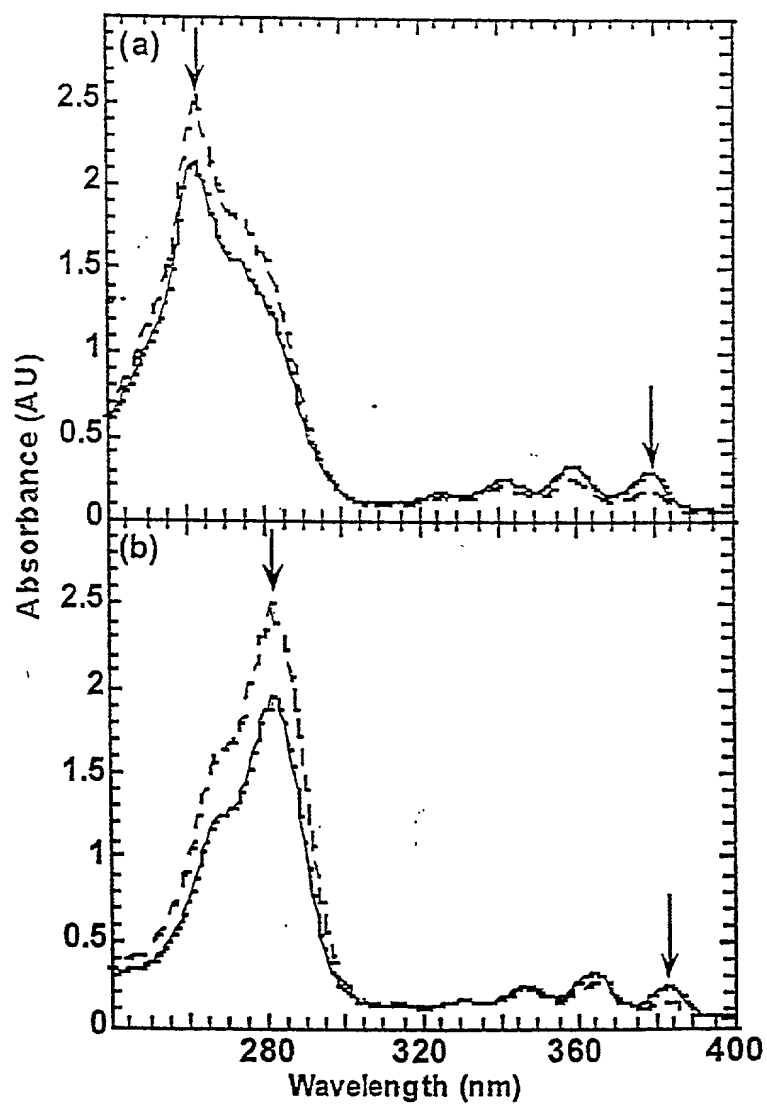
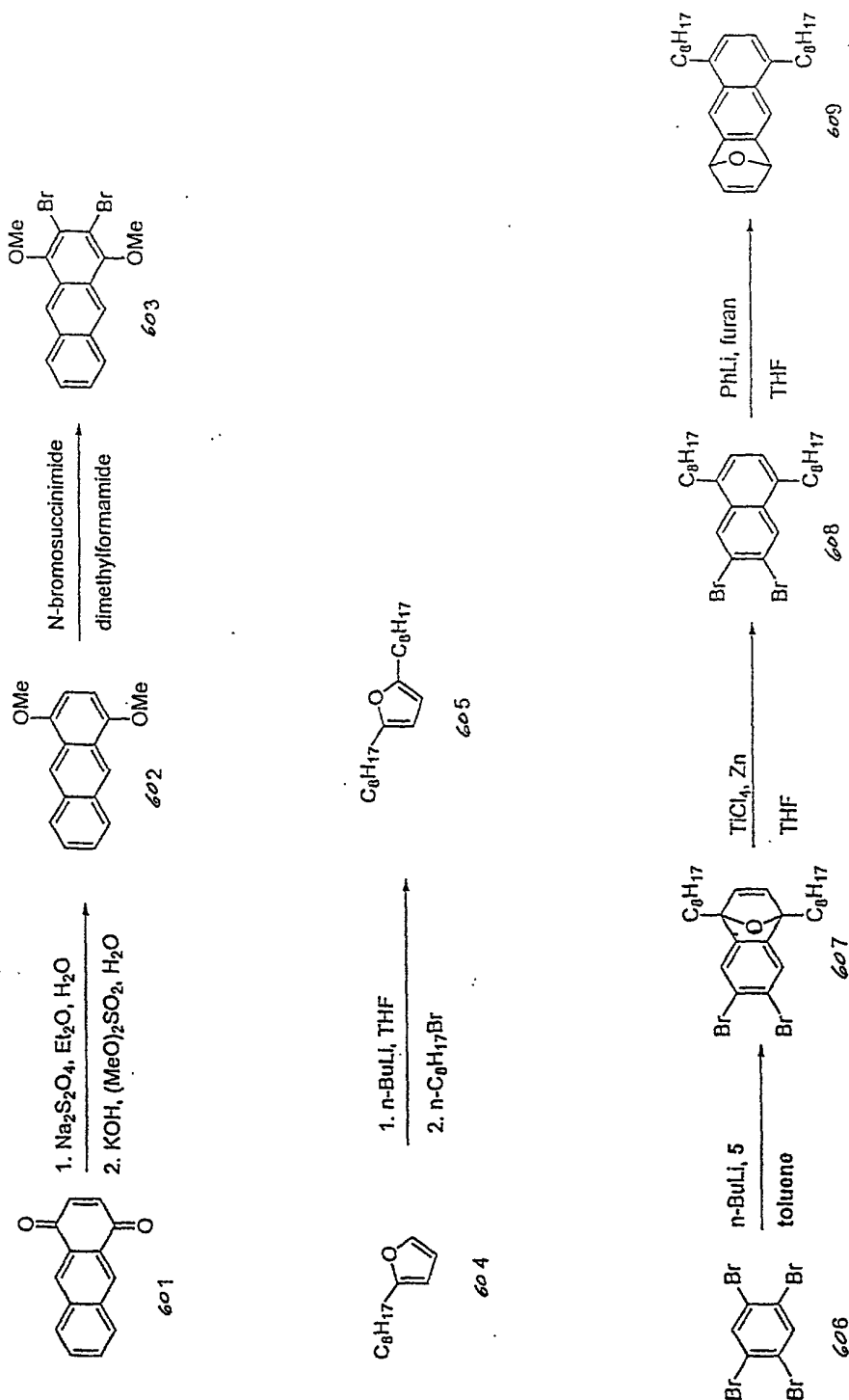


Fig. 6A

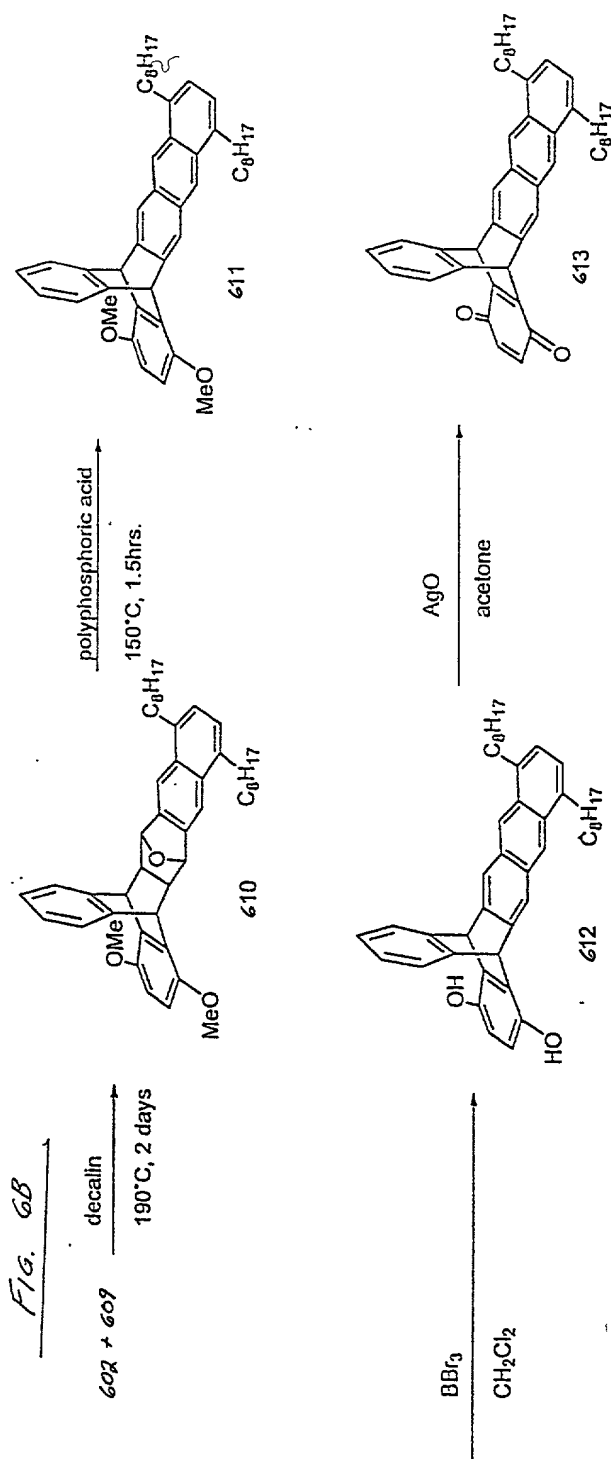


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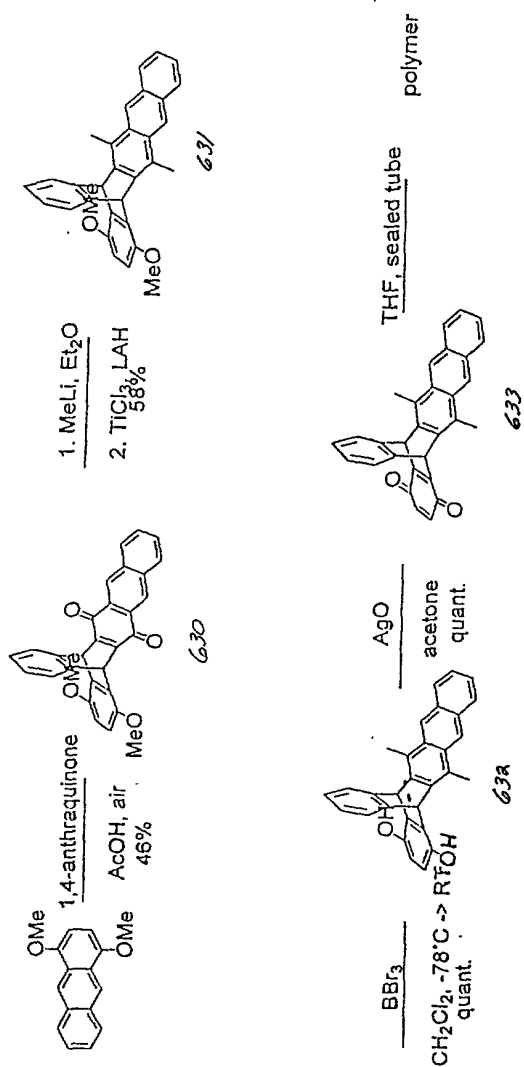


Fig. 6C

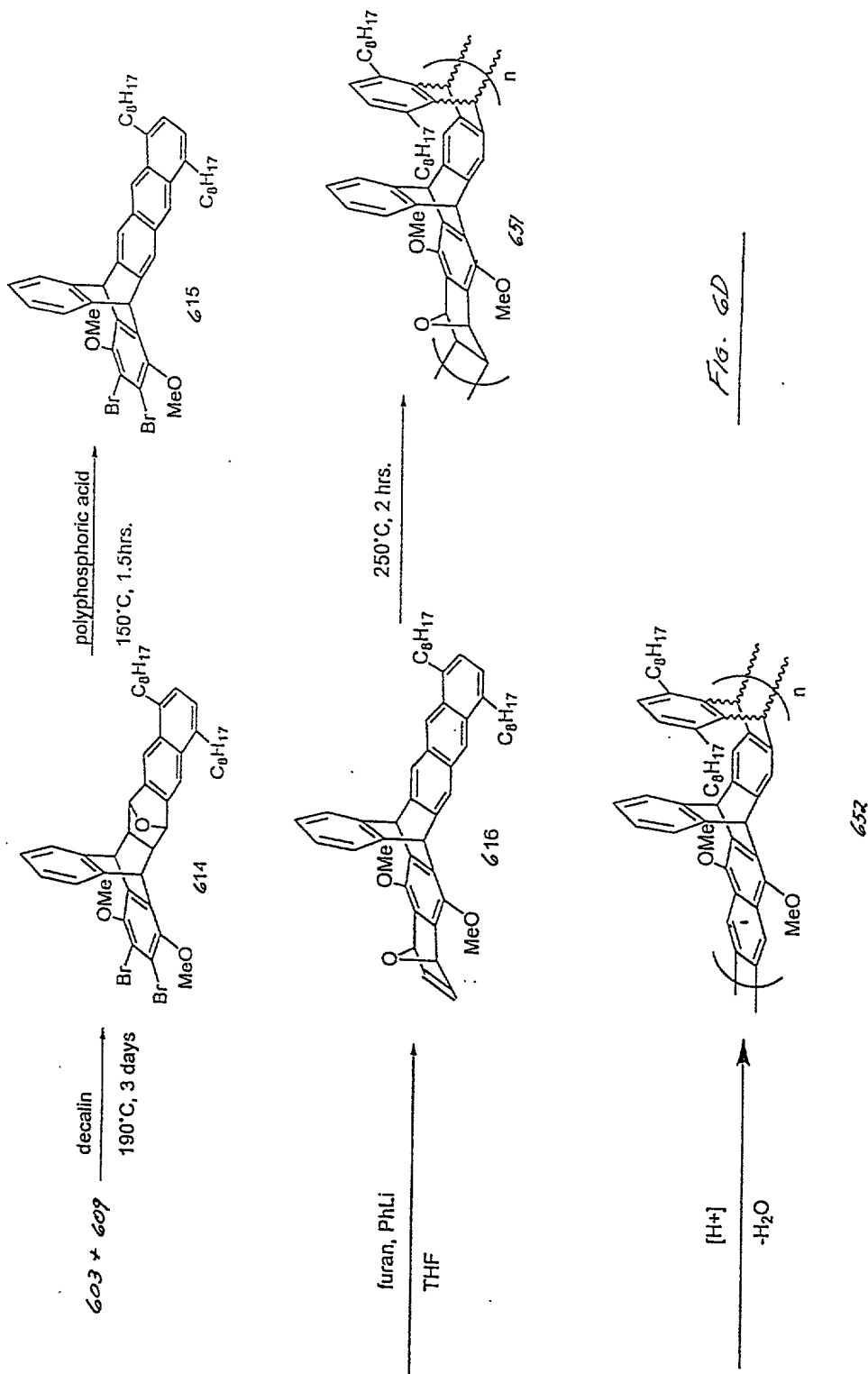


Fig. 6E

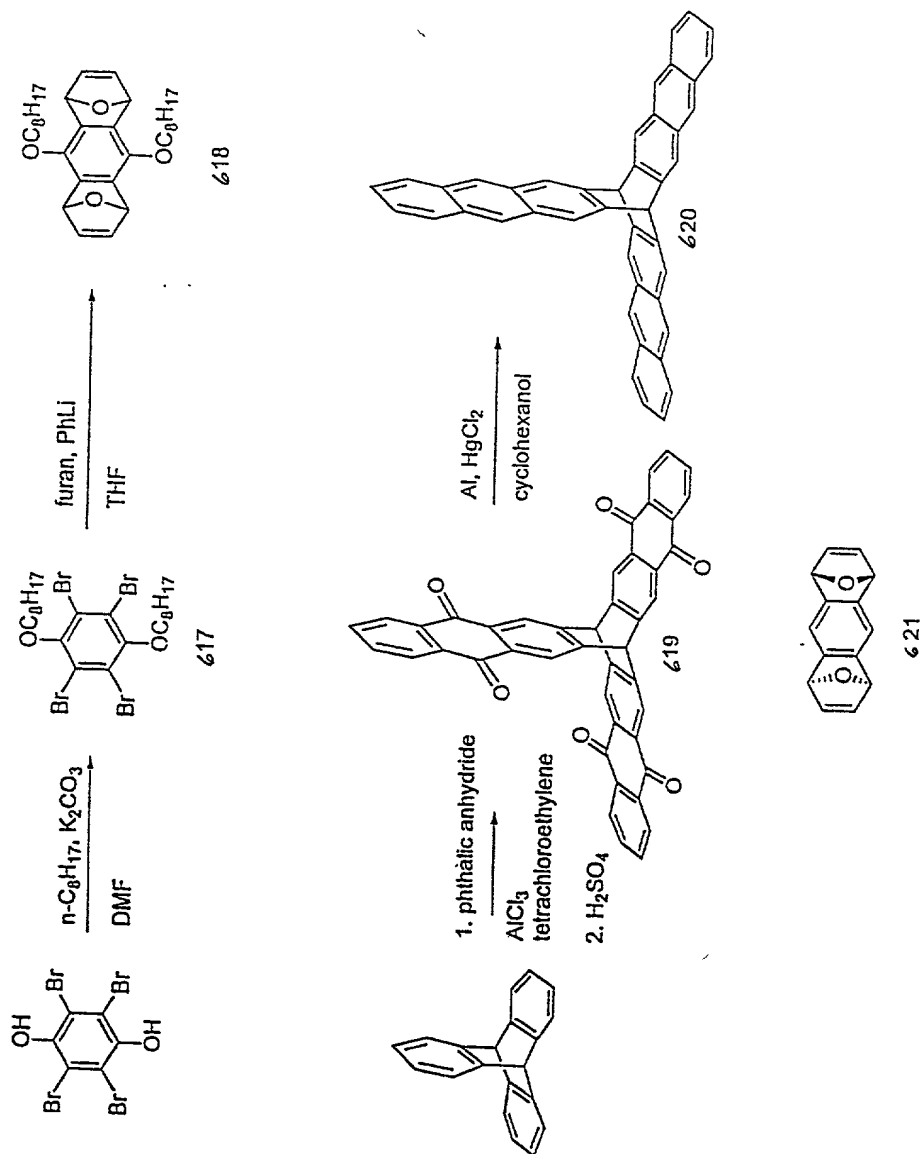
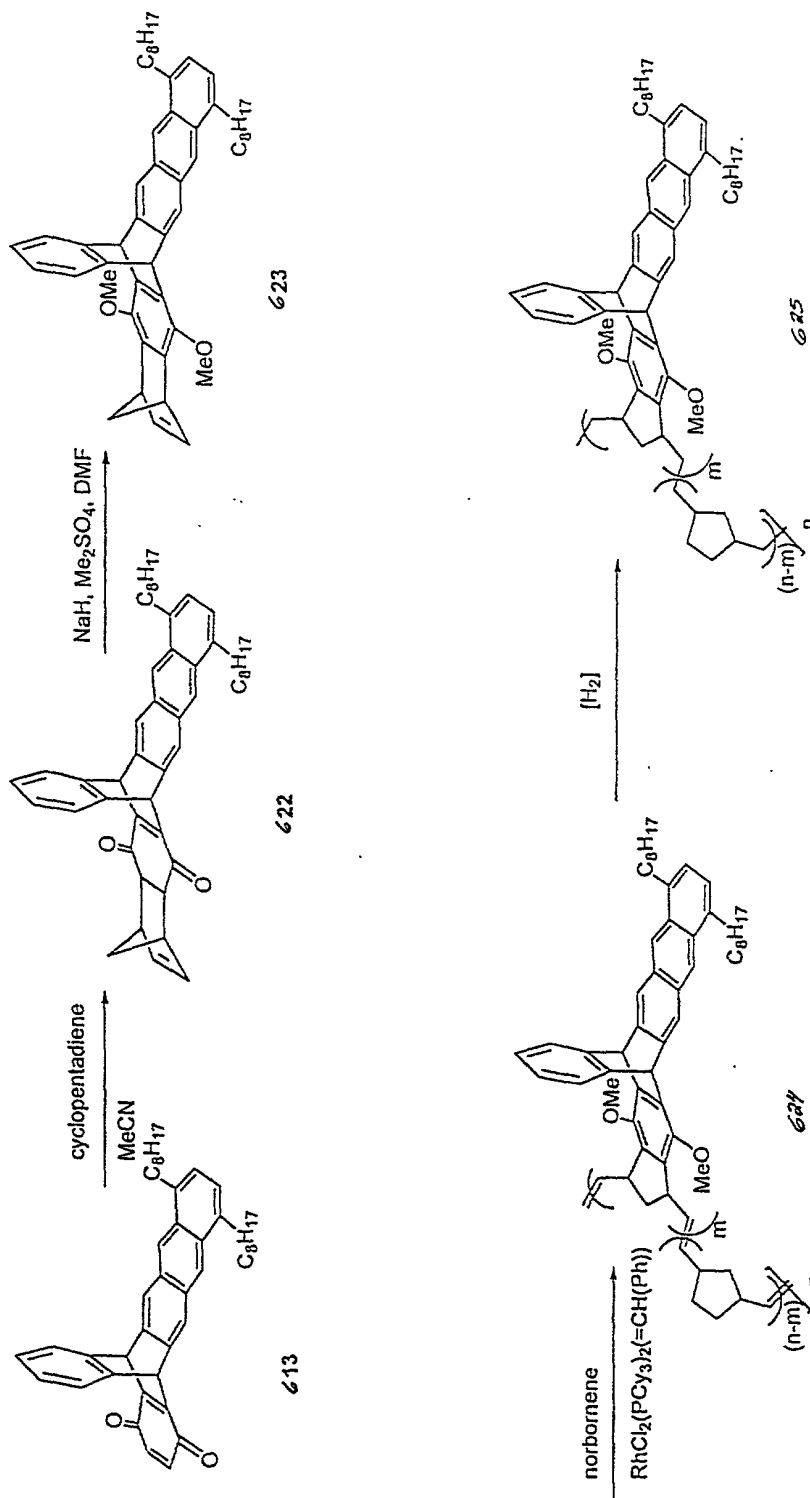


Fig. 6F



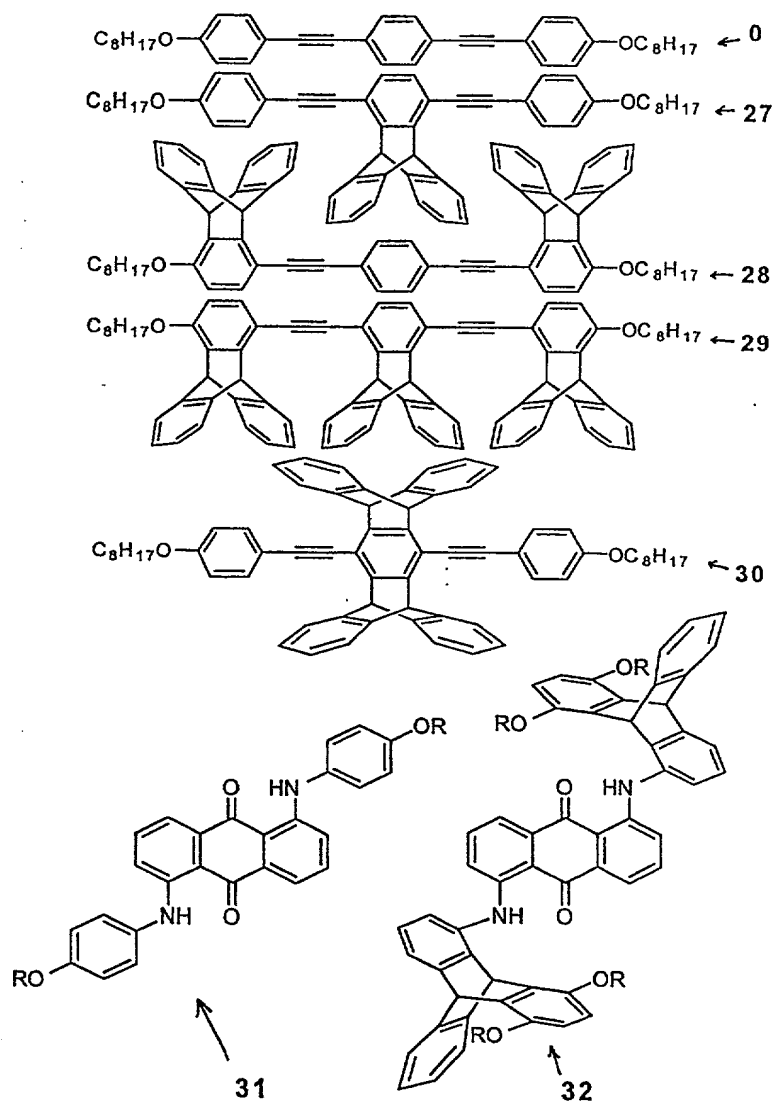
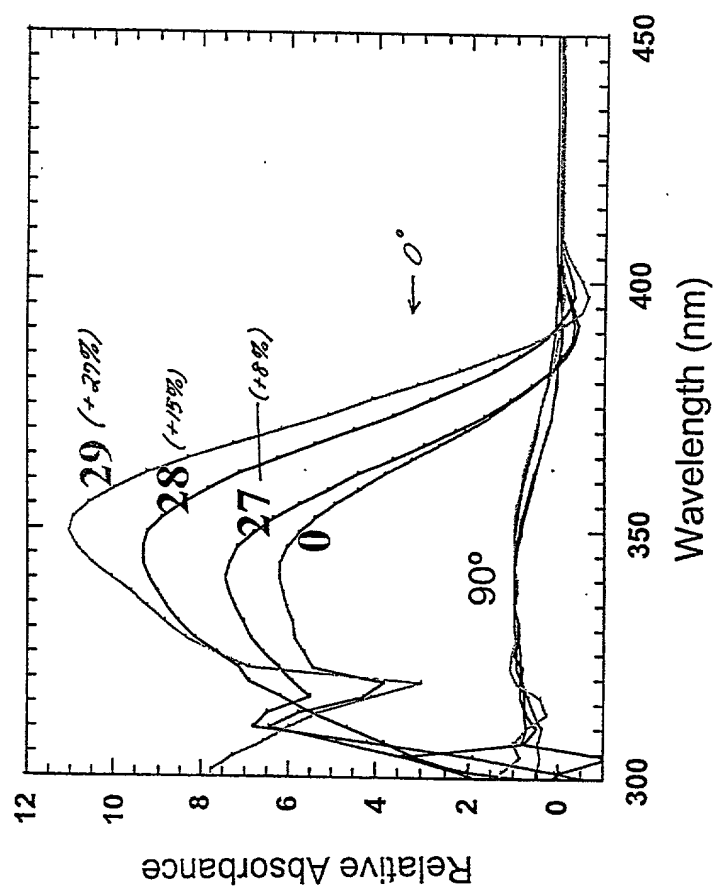


Figure 7. ($\text{R} = \text{nC}_8\text{H}_{17}$)

Figure 8.



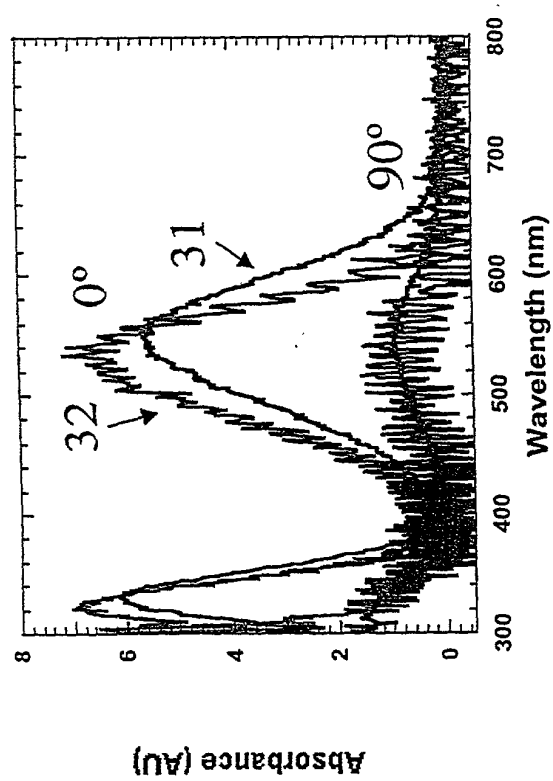
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Figure 9



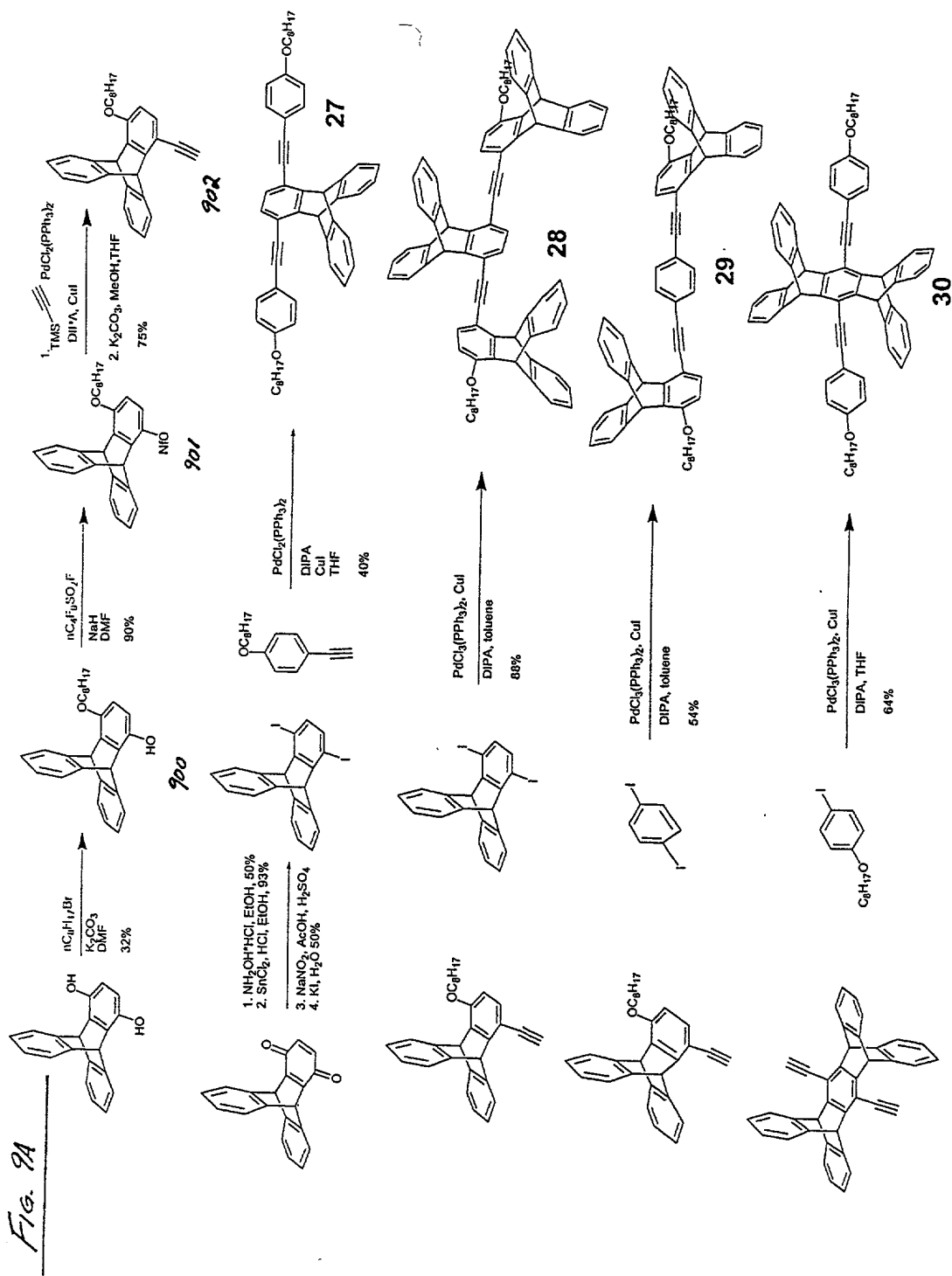
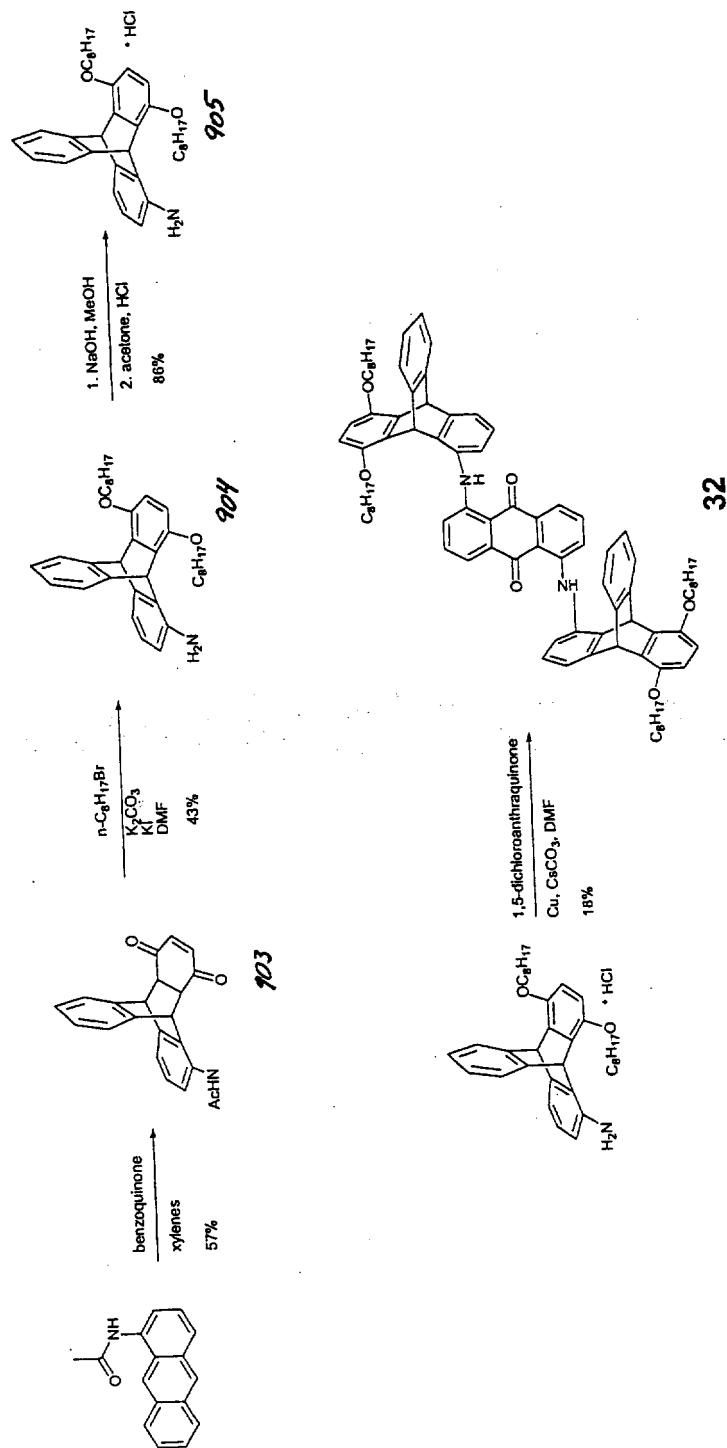


Fig. 9B

SCANNED, # 12



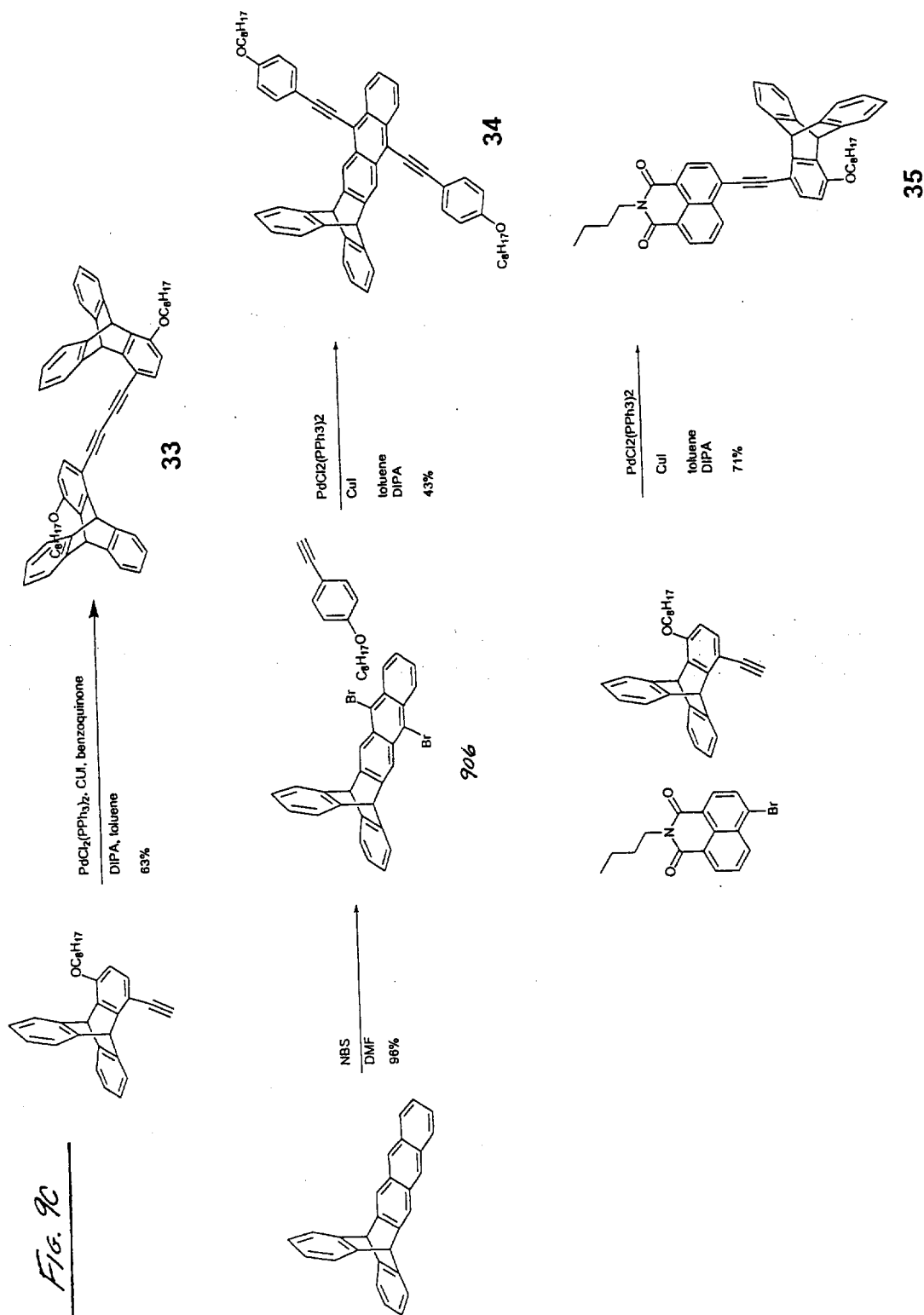


Fig. 9E

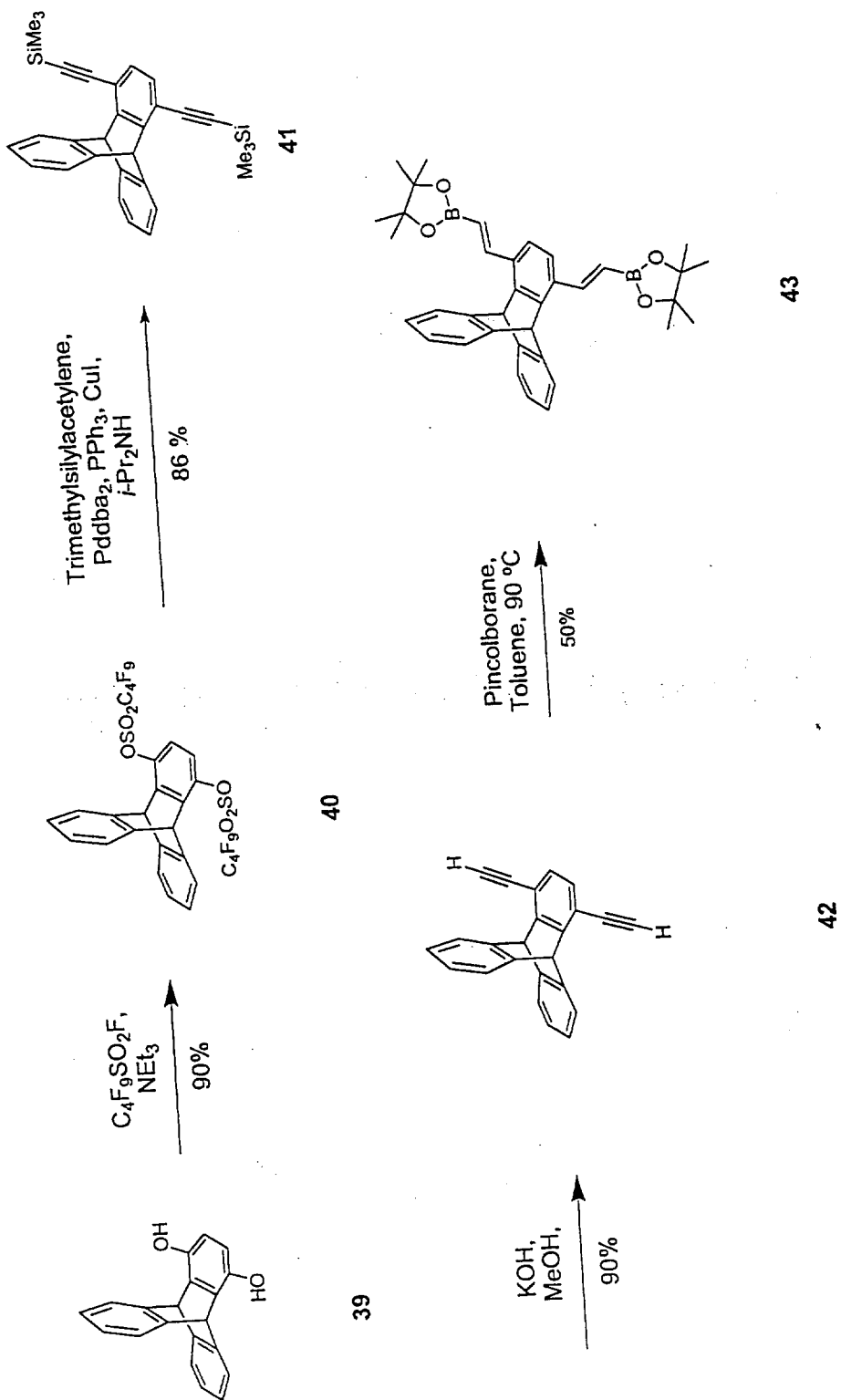


Fig. 9F

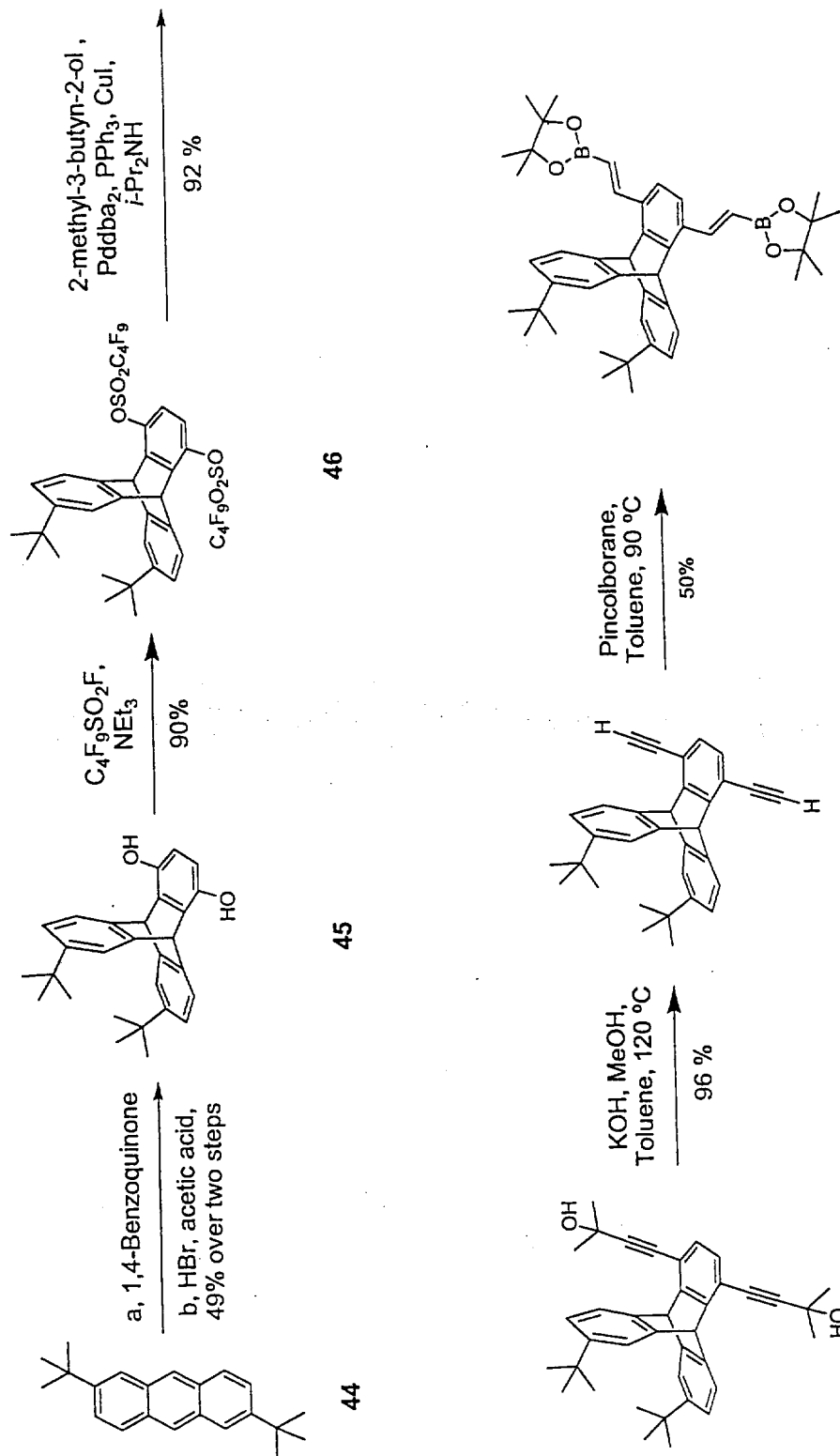
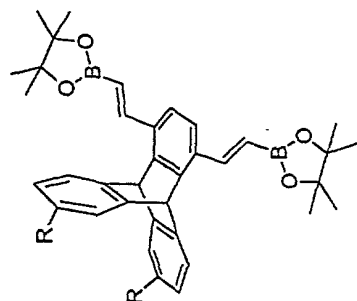
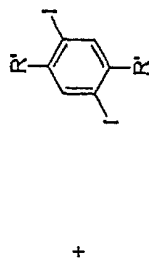


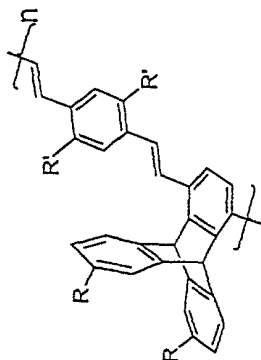
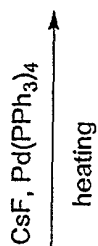
Fig. 9G



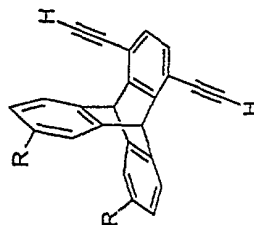
43, R = H
49, R = *tert*-butyl



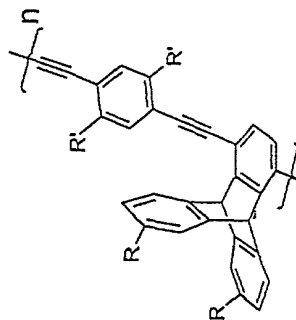
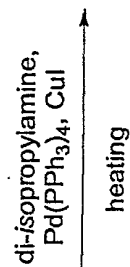
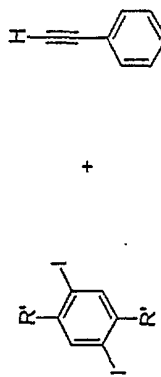
50, R' = -O-*n*-C₁₂H₂₅
51, R' = 2-ethyl-hexyl



52, R = H, R' = -O-*n*-C₁₂H₂₅
53, R = *tert*-butyl, R' = -O-*n*-C₁₂H₂₅
54, R = H, R' = 2-ethyl-hexyl
55, R = *tert*-butyl, R' = 2-ethyl-hexyl

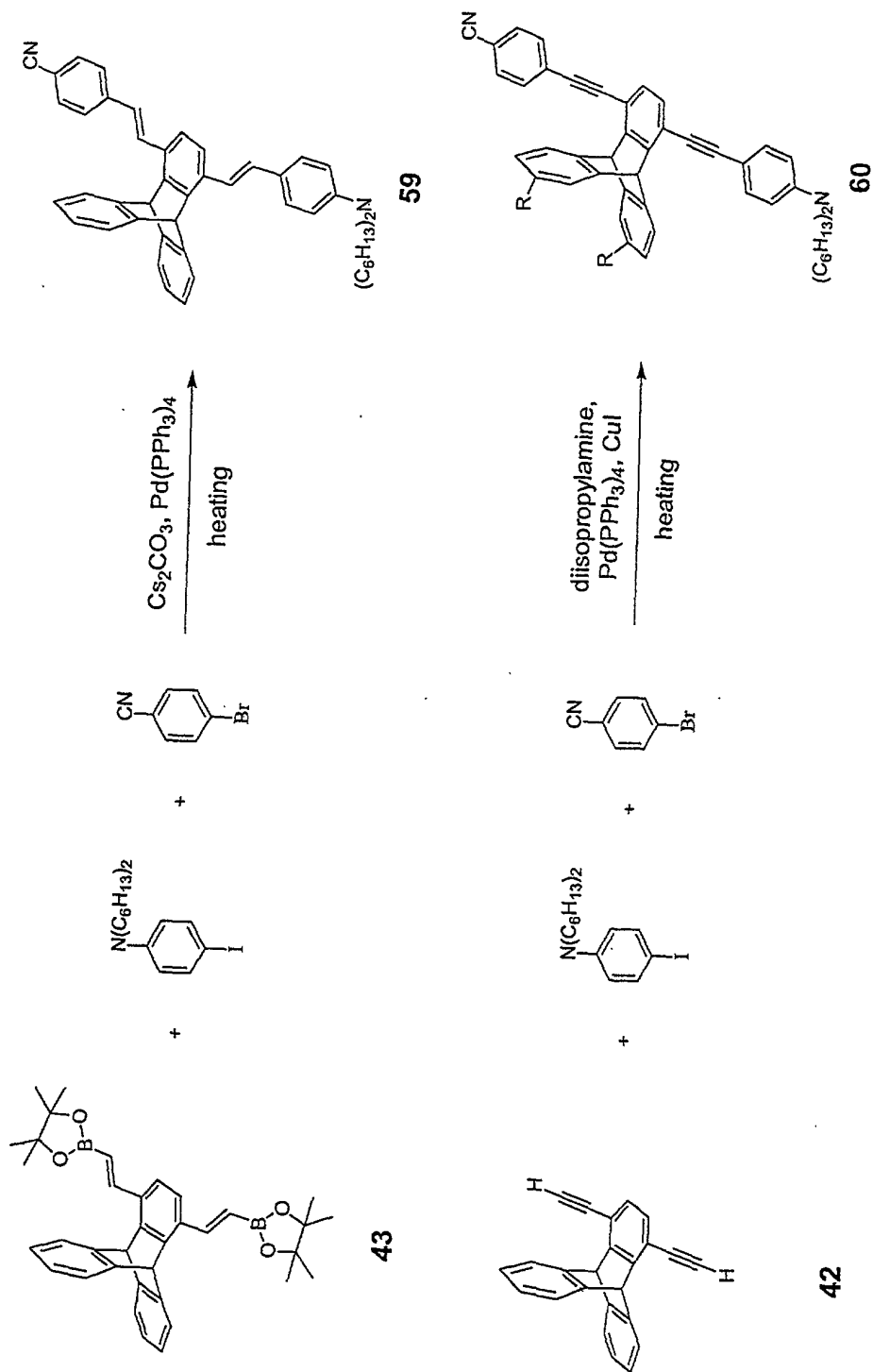


42, R = H
48, R = *tert*-butyl



56, R = H, R' = 2-ethyl-hexyl
57, R = *tert*-butyl, R' = 2-ethyl-hexyl

Fig. 9H



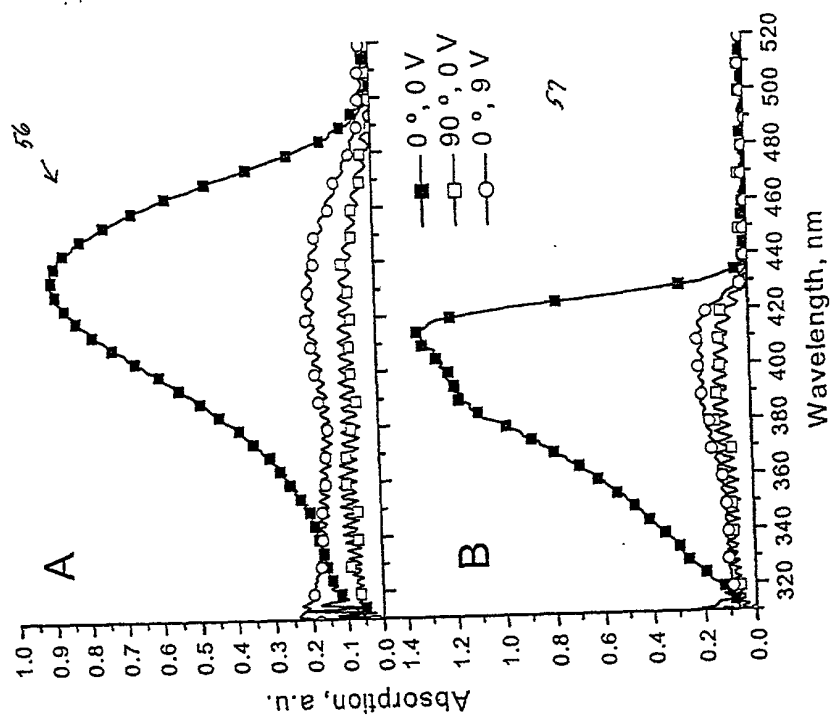


Figure 10

Figure 11

